

REMARKS

Claims 1 – 15 are pending in the application. Applicants amend claims 1, 8, and 12. No new matter is added.

OBJECTION TO CLAIMS

Claims 8 and 12 are objected to in regard to a spelling informality (use of term “predetermine threshold”). As suggested by the Examiner, Applicants amend claims 8 and 12 to replace this term with “predetermined threshold”. Applicants accordingly request that the objection therefore be withdrawn.

OBJECTION TO DRAWING

FIG. 4 is objected to for a mis-spelled term “variabel amplifier”. FIG. 12 is objected to under 37 C.F.R. 1.84 (p)(5) for including a reference sign not mentioned in the specification (“124”). Applicants propose revisions to FIGs. 4 and 12 by attaching replacement drawing sheets including clean and marked-up versions. In FIG. 4, Applicants replace the term “variabel amplifier” with “variable amplifier”. In FIG. 1, Applicants replace reference sign 124 with reference sign 124₁, which is mentioned in the specification at page 24, line 14. Accordingly, Applicants respectfully request the proposed drawing changes be accepted, and that the objection be withdrawn.

REJECTION UNDER 35. U.S.C. §§ 102, 103

Claims 1 – 5, 7 and 9 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,750,022 to Curry. Claims 11 and 13 - 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Curry al. Claims 6, 8, 10 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Curry in view of U.S. Patent No. 6,385,773 to Schwartzman.

Applicants amend claims 1 to clarify the nature of their invention, and respectfully traverse these rejections.

In independent claims 1 and 9, Applicants disclose a system and a device for reducing noise in a signal line. In claim 1, a system is claimed comprising: a) a noise-reduction device, provided between the center and the terminals, which detects a noise increase regarding the upward signals on the signal line and attenuates the upward signals by an increased amount in response to the noise increase, and b) a noise-control device, provided at the terminals, which boosts a transmission level of the upward signals by an amount compensating for the attenuation of the upward signals by said noise-reduction device. In claim 9, the noise-reduction device is claimed, comprising: c) a noise-level-check unit which makes a comparison between a signal component and a noise component that are obtained from a signal line, and detects a noise increase regarding the upward signal based on the comparison, and d) a noise-reduction unit which attenuates the upward signals by an increased amount and transmits a tone signal via downward signals if said noise-level-check unit detects the noise increase.

Curry discloses a two-way cable TV system directed to reducing the effects of noise and interference in the upstream transmission path (see, e.g., FIG. 1 of Curry). Noise measuring equipment 25 is provided in headend 13 for monitoring the upstream transmissions. When noise is detected, LPC 16 in headend 13 enters a search mode, sequentially sending messages to command each of phantom subscribers 29, 29, 87 to selectively open and close associated switches in order to isolate sources of noise on associated trunk lines (see, e.g., column 9, line 1 through 57 of Curry). Once a noise source is thereby isolated, LPC 16 sends a command to the line control unit immediately upstream of the noise source instructing the line unit to boost its gain, and sends a command to the line control unit immediately downstream from the noise source to attenuate the signal on its upstream transmission path. In this manner, the signal

associated with the noise source may be attenuated while the level of the desired upstream signal is maintained.

Applicants' claim a noise-reduction device positioned between a center (headend) device and a plurality of terminals that detects an increase in noise in upward signals on the upstream transmission path, and directly attenuates the upward signals by an increased amount in response to the noise increase. At each of the terminals, a noise-control device is provided to boost a transmission level of its upward signals by a corresponding amount to compensate for the attenuation of the upward signals by the noise-reduction device.

In the system as disclosed by Applicants, in sharp contrast to Curry, there is no need for a device at the headend to first locate and isolate the source of noise by an extensive search operation and then control line control units to eliminate the noise source. Rather, Applicants' claimed noise control device simply detects an increase in noise, and takes necessary action directly to reduce the noise by attenuating upward signals. As a result, the need for the noise source isolation and control means as taught by Curry is avoided.

Applicants's claimed noise-reduction units provided at the terminals boost transmission levels to offset the noise sources, which are primarily located at the terminal ends. Thus, unlike the system of Curry, each node of Applicant's system need not be equipped with a noise-reduction device, a noise-control device and associated isolation and control means.

Accordingly, Applicant respectfully submits that independent claims 1 and 9 are not anticipated by Curry, and are therefore in condition for allowance. As claims 2 – 8 and 10 – 15 each depend from one of allowable claims 1 and 9, Applicant respectfully submits that claims 2 – 8 and 10 – 15 are also allowable for at least this reason.



An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 – 15, consisting of independent claims 1 and 9, and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, she is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,

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FIG. 4

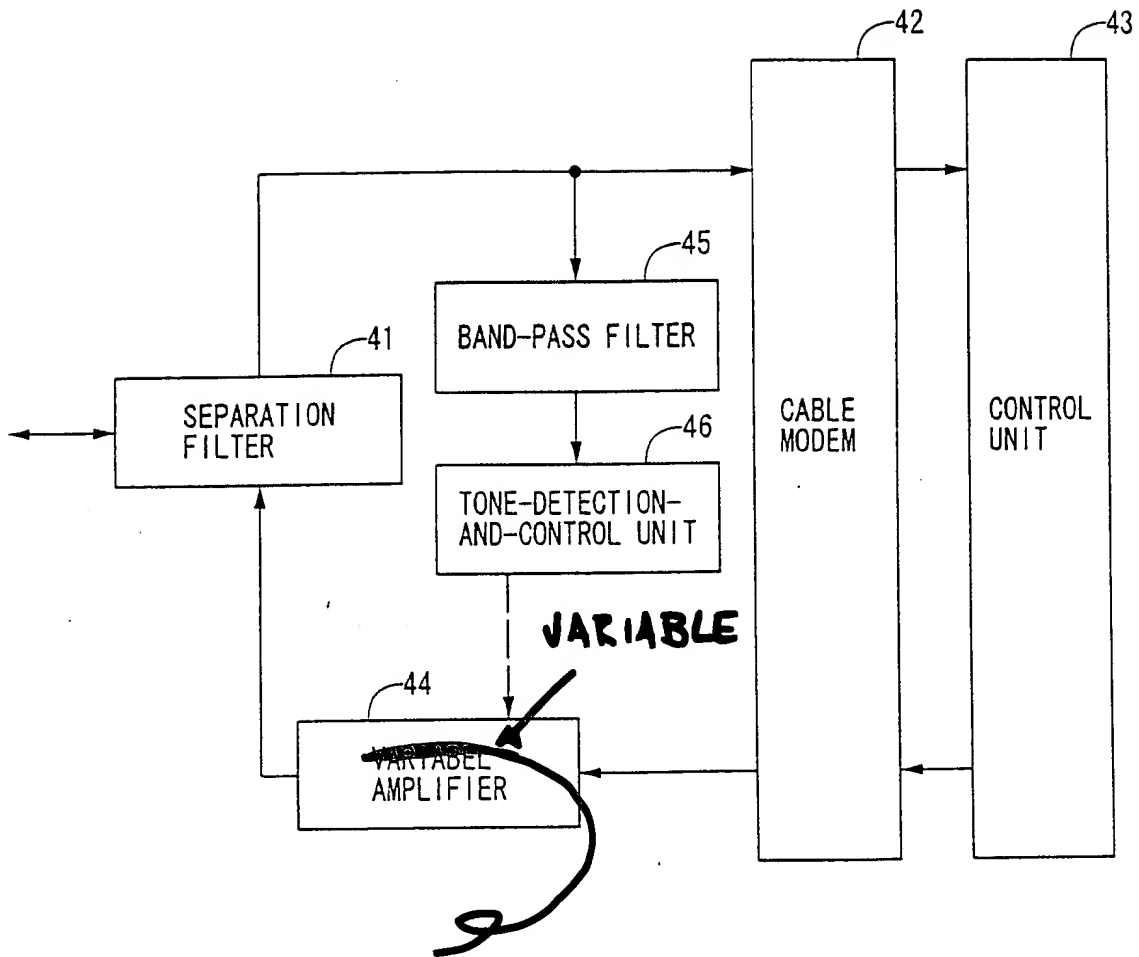


FIG. 12

